IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-33. (Cancelled)

34. (Previously amended) A video game controller in communication with a computing device, comprising:

a microphone affixed to the video game controller, the microphone configured to detect an audio signal that includes a target audio signal in a far field relative to the microphone and disturbance noise in a near field relative to the microphone;

logic to process the audio signal, the logic including,

logic for executing signal decorrelation on the audio signal, the signal decorrelation acting to reduce an amplitude of the target audio signal while magnifying the disturbance noise;

logic for down sampling the decorrelated audio signal;

detection signal logic to generate a detection signal through an even ordered derivative that is less than or equal to a tenth derivative that is applied to the decorrelated and down sampled audio signal; and

disturbance cancellation logic for removing disturbance noise from the audio signal through analysis of the detection signal.

35. (Original) The video game controller of claim 34, wherein the disturbance cancellation logic includes,

logic for identifying if a signal sequence of the disturbance noise is associated with the target audio signal.

36. (Previously presented) The video game controller of claim 35, further comprising multiple microphones, wherein each of the multiple microphones is defined to independently identify whether the disturbance noise is above a threshold level.

37. (Previously presented) The video game controller of claim 34, wherein the down sampling reduces an amount of data associated with the detection signal, as compared to the audio signal, by a factor of ten.

38.-44. (Canceled)

45. (Currently amended) Non-transitory computer ~~Computer~~ readable media having program instructions for processing an audio signal obtained from a video game controller having a microphone affixed thereto, the microphone configured to detect an audio signal that includes a target audio signal in a far field relative to the microphone and disturbance noise in a near field relative to the microphone, the computer readable media further having,

program instructions to process the audio signal, the program instructions including,

instructions for executing signal decorrelation on the audio signal, the signal decorrelation acting to reduce an amplitude of the target audio signal while magnifying the disturbance noise;

instructions for down sampling the decorrelated audio signal;

detection signal instructions to generate a detection signal through an even ordered derivative that is less than or equal to a tenth derivative that is applied to the decorrelated and down sampled audio signal; and

disturbance cancellation instructions for removing disturbance noise from the audio signal through analysis of the detection signal.

46. (Currently amended) The non-transitory computer readable media of claim 45, wherein the disturbance cancellation instructions include,

program instructions for identifying if a signal sequence of the disturbance noise is associated with the target audio signal.

47. (Currently amended) The non-transitory computer readable media of claim 45, wherein the down program instructions for down sampling reduces an amount of data associated with the detection signal, as compared to the audio signal, by a factor of ten.